

Carbon dioxide sequestration through carbonation of cement-based materials under high temperature

High temperature carbonation (20°C~700°C)

- **Mechanism exploration**

Stage I: similar to normal temperature, liquid water is essential.
 Stage II: reaction between dehydrated CH and CSH with CO₂.

- **Parametric analysis:** W/C ratio, RH, size, CO₂ concentration et. al
- **CO₂ sequestration efficiency evaluation**

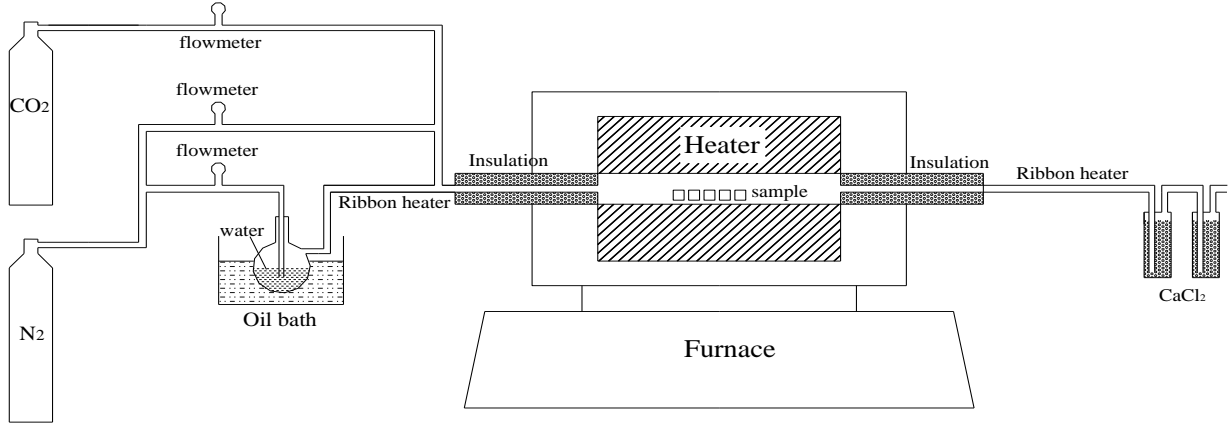


Fig. 1 Experiment setup

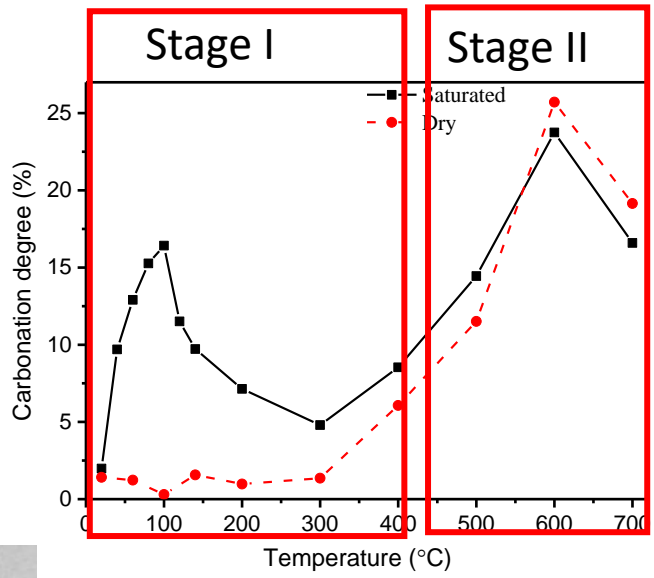


Fig. 2

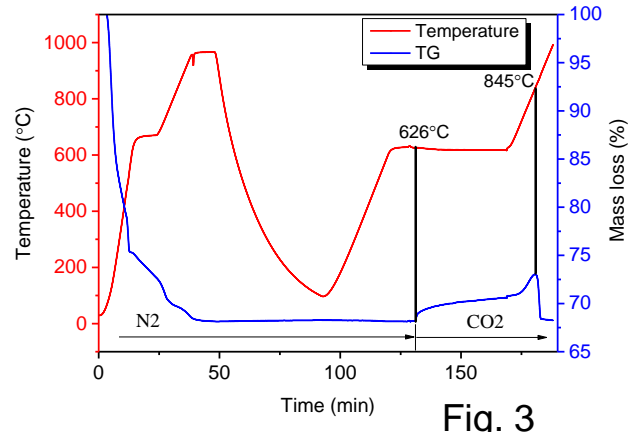


Fig. 3

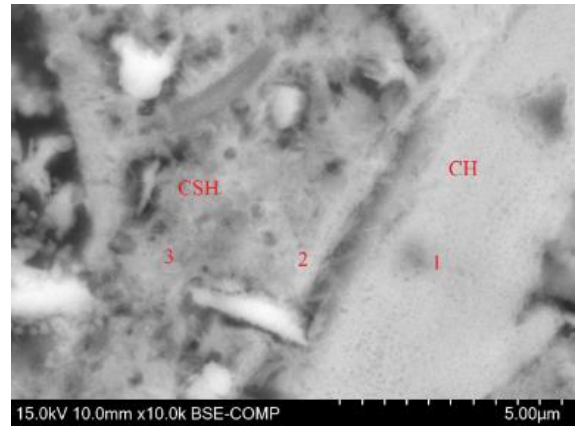


Figure 4: SEM results of samples after carbonation at 600°C environment

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